## DETAILED ACTION

This Office Action is in response to Applicants' Amendment and Remarks filed on 29 October 2009 in which claims 1-57 and 74 were previously cancelled, and claims 58 and 75 are amended to correct for grammatical informalities.

Claims 58-73 and 75 are pending in the instant application and are examined on its merits herein.

### *Priority*

This application is a National Stage entry of PCT/FI03/00533 filed on 2 July 2003 and claims priority to foreign application Finland 20021312 filed on 3 July 2002. A certified copy of the foreign priority document in Finnish is received.

### *Terminal Disclaimer*

The terminal disclaimer filed on 29 October 2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,764,706 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### *Objections Withdrawn*

Applicants' amendment, filed 29 October 2009, with respect to the objection of claims 58 and 75 for containing grammatical informalities, has been fully considered and is persuasive because the amendment corrects the grammatical informalities.

These objections have been **withdrawn**.

### *Rejections Withdrawn*

Applicants' amendment and remarks, filed 29 October 2009, with respect to the rejection of claims 58-73 and 75 under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention, has been fully considered and is persuasive because Applicants pointed out in their arguments that step (c) refers to the size of the microcrystals, whereas step (d) refers to the size of the granules, which contain a plurality of microcrystals. Thus, the metes and bounds of the claim are clear. This rejection has been **withdrawn**.

Applicants' amendment and remarks, filed 29 October 2009, with respect to the rejection of claims 58-73 and 75 under 35 USC § 103(a), as being unpatentable over U.S. Patent No. 6,764,706 B1 to Heikkilä *et al.*, in view of US Patent No. 5,017,400 to Olinger *et al.*, have been fully considered and are persuasive. Applicants are requested to note that in the Office Action dated 31 July 2009, claim 61 was not indicated as being part of the rejected claims. However, as clarified in a telephone interview with Mr. Andy Zhen on 25 September 2009, claim 61 was inadvertently left out of the rejection. The statement of rejection should properly read that claims 58-73 and 75 are rejected over the prior art, as construed by Applicants. Applicants have invoked 35 USC § 103(c) and stated that "at the time the present invention was made, the '706 patent and the present invention were owned by the common owner, which is Danisco Sweeteners OY, or was

subject to an obligation of assignment to Danisco Sweeteners OY." Since the '706 patent was only applied through the 35 USC § 102(e) prior art date, Applicants' statement under 35 USC § 103(c) is sufficient to remove the '706 patent as a prior art reference. This rejection has been **withdrawn**.

The following are new grounds of objections and rejections.

***Claim Objections***

Claims 58 and 66 are objected to because of the following informalities:

The recitation "(DS)" should be inserted after the recitation "dry solids" on line 2 of part (a) in claim 58 since this abbreviation is used elsewhere in the claims (for example, claim 59). Appropriate correction is required.

The recitation "optionally" in part (d) of claim 58 should begin with a lower case letter as it is not the beginning of a sentence or a proper noun. Appropriate correction is required.

The conjunction "and" should be inserted in claim 66 as shown in the following recitation "another polyol, <u>and</u> milled crystals," in order to put the claim in proper Markush format.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Section [0001]**

Claims 58-73 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO publication WO 99/59426 to Heikkilä *et al.* (IDS dated 11 February 2005), in view of US Patent No. 5,017,400 to Olinger *et al.* (herein referred to as the '400 patent, of record).

Heikkilä *et al.* teach a process for the crystallization of xylitol (page 20, claims 1 and 2), comprising the steps of (a) contacting a liquid containing dissolved xylitol, that is present at a concentration between 30% - 80% by weight, with gas suspended fine solid particles containing microcrystalline xylitol, (b) causing substantial removal of the solvent component of said liquid and allowing the resulting xylitol material to form an essentially solid composition of matter comprising a multitude of microcrystals of xylitol, and (c) causing said xylitol composition to be conditioned during a further drying step to provide a product consisting essentially throughout its entire structure of a multitude of microcrystals of xylitol agglomerated together in a random manner. In addition to microcrystalline xylitol, other sweeteners that are preferably non-cariogenic may be added to the xylitol composition (p. 5, first and second full paragraph). The processed crystalline xylitol can be made into confectionery, foodstuffs, pharmaceuticals, and oral hygiene products (p. 1, paragraph 2).

To obtain a solid feed of said fine solid particles containing microcrystalline xylitol, Heikkilä *et al.* teach that a portion of the microcrystalline xylitol particles, having a desired mean particle size below 0.2 mm (equivalent to 200 $\mu$m), preferably below about 0.1 mm, are further recirculated (p. 7, third full paragraph; claim 19). In the absence of microcrystalline xylitol, the solid feed used at the start-up of the process may comprise milled crystalline xylitol from another source (p. 4, first incomplete paragraph). Additionally, the crystal mass may also include minor portions of amorphous xylitol (p. 4, paragraph 5). Example 3 shows the use of powdered xylitol as the solid feed during start-up (p. 13, paragraph 4).

For the process involving water solvent removal, Heikkilä *et al.* further stipulate that the process provides a xylitol material dried to a free moisture content of about 0.1% – 3% while said xylitol material is still in a suspended state (p. 7, paragraph 5; claim 8). Furthermore, the solid particles are to be retained in a fluidized state until they have grown to a predetermined weight (claim 18). The xylitol material is then collected by allowing it to settle on a moving belt and to form thereon a substantially continuous agglomerated porous powder layer (p. 8, paragraph 3; claim 10). The water content of the preferred microcrystalline xylitol product varies according to the production parameters in the range of 0.1% to about 1%, preferably about 0.1 to 0.3% (p. 10, paragraph 6).

For the conditioning step in the process for crystallization of xylitol, Heikkilä *et al.* indicate that the microcrystallized particles are conditioned at a temperature of about 50 °C - 100 °C (claim 11). Thereafter, the microcrystalline xylitol particles are broken up and further fractionated (equivalent to sieving) so as to provide particles having a mean particle size of about 0.1 – 10 mm, preferably about 0.15 – 0.4 mm (p. 9, paragraph 5; claims 14-16). The reference further teaches that xylitol particle size is not critical, and may be varied according to intended use of the product (p. 4, paragraph 3). The microcrystals in each product particle are generally on average below 50 μm in size, preferably about 10 μm in size on an average (p. 10, paragraph 4).

Heikkilä *et al.* also teach that microcrystalline xylitol may be microcrystallized with other compounds (p. 5, paragraphs 1-3). If the solid and/or liquid feed comprises other components, the product discharged from the microcrystallization apparatus will contain

said other component(s) (p. 5, paragraph 5). These components can be an excipient, an active ingredient, and/or other sweetener (claim 5). Such other sweeteners are preferably also non-cariogenic (p. 5, paragraph 2). An alternate process by which other components can be microcrystallized with xylitol is by using a secondary spray containing the excipient, active ingredient, or sweetener (p. 5, paragraph 5; claim 6).

It is noted that although Heikkilä *et al.* teach that microcrystalline xylitol may be microcrystallized with other compounds by discharging a solution containing both the xylitol and the other compound, or by using a secondary spray containing the other compound, separate from xylitol, Heikkilä *et al.* do not expressly indicate whether the separate solutions are sprayed simultaneously or intermittently onto the dry feed particles. However, as both methods would yield a similar result, it is considered within the capabilities of one of ordinary skill in the art to determine the method most suitable for their intended purpose. Applicants are requested to note that it has been held that merely reversing the order of steps in a multi-step process is not a patentable modification absent unexpected or unobvious results. See MPEP § 2144.04. *Ex parte Rubin*, 128 USPQ 440 (Bd. App. 1959); *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946); *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930); *Cohn v. Comr. Patents*, 251 F. Supp. 437, 148 USPQ 486 (D.C. 1966). It is the Office's position that this is also applicable to the instant situation in which solutions are sprayed simultaneously or intermittently since the difference is merely an order of when the different solutions are applied onto the feed to form the product.

It is further noted that Heikkilä *et al.* do not expressly teach that the ratio of liquid feed to dry feed is between 1:1 and 1:2 on DS, as instantly claimed. However, Table 1 (p. 12) discloses a variety of conditions used for xylitol microcrystallization, including conditions in which the amount of feed solution and dry feed is varied. For example, the DS concentration of the feed solution can be 65.6% or 72%, and the dry feed varies from 0.6-2.0 kg. Since these values are within the range of those disclosed in the instant Specification, it is the Office's position that they would meet the instant limitations that the ratio of liquid feed to dry feed is between 1:1 and 1:2 on DS. Furthermore, Heikkilä *et al.* teach that the suitable ratio of liquid xylitol feed to solid xylitol feed varies with the microcrystallization conditions (p, 8, first full paragraph), and can therefore be adjusted accordingly.

Although Heikkilä *et al.* teach that other components, such as non-cariogenic sweeteners, may be microcrystallized with microcrystalline xylitol, Heikkilä *et al.* do not expressly teach a process for the microcrystallization of polyols wherein the polyols comprise at least two polyols.

The Olinger '400 patent teaches a sweetener composition which contains, as its principal ingredients, from about 10% - 90% by weight of crystalline maltitol and from about 90% - 10% by weight of crystalline xylitol. Xylitol is the sweetest sugar-free alcohol and is considered isosweet to sucrose (column 1, line 38). Maltitol has a sweetness similar to that of sucrose, a sweetness equivalent to 0.8-0.9 of sucrose (column 2, line 8). Their comparable sweetness to sucrose makes these polyols ideal as sucrose replacements. Furthermore, a xylitol and maltitol combination exhibits

sweetness synergism that also lacks the undesired burning aftertaste of pure xylitol (abstract; claim 1). The maltitol/xylitol sweetener composition is used to sweeten sugar-free products such as chocolate and other confectionery products, as well as dietetic products (column 1, line 9). Olinger *et al.* also teach that this sweetener composition is noncariogenic and, in some instances, cariostatic (column 1, line 12).

As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Heikkilä *et al.*, regarding a process for the microcrystallization of xylitol with other components, with the teachings of Olinger *et al.,* which teach a sweetener composition that contains a combination of maltitol and xylitol. One would have been motivated to combine the teachings and include maltitol in the xylitol crystallization process, in order to receive the expected benefit, as suggested by Olinger *et al.*, that a combination of xylitol and maltitol exhibits sweetness synergism, and also lacks the undesired burning taste of pure xylitol. Since Heikkilä *et al.* teach that other sweeteners that are preferably non-cariogenic may also be added to the xylitol composition for microcrystallization, one of ordinary skill in the art would have reasonably expected the addition of maltitol to the xylitol microcrystallization process to result in co-crystallization of maltitol and xylitol. With regards to the limitation wherein each of the dissolved polyols must be present in at least 25% by weight, it is noted that Heikkilä *et al.* teach that the xylitol purity is preferably more than 80%. However, as the Olinger '400 patent teaches a sweetener composition containing from about 10-90% by weight of crystalline maltitol and from about 90-10% by weight of crystalline xylitol, it would have been *prima facie* obvious for one of ordinary skill in the art to vary the

concentration of the method so as to obtain an optimal method for producing a product with optimal taste. See below for recitation of a section from MPEP § 2144.05 regarding the obviousness of optimization of ranges.

The following is a quotation of MPEP § 2144.05:

> A. Optimization Within Prior Art Conditions or Through Routine Experimentation
> Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.); see also Peterson, 315 F.3d at 1330, 65 USPQ2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969) (Claimed elastomeric polyurethanes which fell within the broad scope of the references were held to be unpatentable thereover because, among other reasons, there was no evidence of the criticality of the claimed ranges of molecular weight or molar proportions.). For more recent cases applying this principle, see Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

Moreover, one would also be motivated to vary the concentration of polyols in the crystallization process in order to co-crystallize maltitol and xylitol so as to obtain a product with optimal taste since it is *prima facie* obvious that the addition of one component, comprising co-crystals of maltitol and xylitol, would require less steps than having to add two separate polyol crystals, to a composition in order to obtain a product with desired taste.

Thus, the claimed invention as a whole is *prima facie* obvious over the combined teachings of the prior art.

**Section [0002]**

Claims 58-73 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO publication WO 99/47532 to Heikkilä *et al.* (PTO-892, Ref. N), in view of WO 91/07100 to Oravainen *et al.* (IDS dated 11 February 2005).

Heikkilä *et al.* teach a process for the crystallization of lactitol (page 21, claims 1 and 2), comprising the steps of (a) contacting a liquid containing dissolved lactitol, that is present at a concentration between 30% - 80% by weight, with gas suspended fine solid particles containing microcrystalline lactitol, (b) causing substantial removal of the solvent component of said liquid and allowing the resulting lactitol material to form an essentially solid composition of matter comprising a multitude of microcrystals of lactitol, and (c) causing said lactitol composition to be conditioned during a further drying step to provide a product consisting essentially throughout its entire structure of a multitude of microcrystals of lactitol agglomerated together in a random manner. In addition to microcrystalline lactitol, other sweeteners that are preferably non-cariogenic may be added to the lactitol composition (p. 5, first and second full paragraph). The processed crystalline lactitol can be made into confectionery, foodstuffs, pharmaceuticals, and oral hygiene products (p. 1, paragraph 2).

To obtain a solid feed of said fine solid particles containing microcrystalline lactitol, Heikkilä *et al.* teach that a portion of the microcrystalline lactitol particles, having a desired mean particle size below 0.2 mm (equivalent to 200 $\mu$m), preferably below about 0.1 mm, are further recirculated (p. 7, first incomplete paragraph; claim 19). In the absence of microcrystalline lactitol, the solid feed used at the start-up of the process may comprise milled crystalline lactitol from another source (p. 3-4, bridging paragraph).

Additionally, the crystal mass may also include other lactitol hydrate forms, such as lactitol dehydrate and/or amorphous lactitol (p. 4, paragraph 5). Example 3 shows the use of powdered lactitol as the solid feed during start-up (p. 13, paragraph 2). For the process involving water solvent removal, Heikkilä *et al.* further stipulate that the process provides a lactitol material dried to a free moisture content of about 0.1% – 3% while said lactitol material is still in a suspended state (p. 7, paragraph 2; claim 8). Furthermore, the solid particles are to be retained in a fluidized state until they have grown to a predetermined weight (p. 3, paragraph 6). The lactitol material is then collected by allowing it to settle on a moving belt and to form thereon a substantially continuous agglomerated porous powder layer (p. 7-8, bridging paragraph; claim 11). The water content of the preferred resulting microcrystalline lactitol product varies according to production parameters in the range of 0.1% to about 6% (p. 10, paragraph 2).

For the conditioning step in the process for crystallization of lactitol, Heikkilä *et al.* indicate that the microcrystallized particles are conditioned at a temperature of about 50 °C - 100 °C (claims 12 and 13). Thereafter, the microcrystalline lactitol particles are broken up and further fractionated (equivalent to sieving) so as to provide particles having a mean particle size of about 0.1 – 10 mm, preferably about 0.15 – 0.4 mm (p. 8, last paragraph; claims 14-16). The reference further teaches that lactitol particle size is not critical, and may be controlled to suit the intended use (p. 4, paragraph 3). The microcrystals in each product particle are generally on average below 50 μm in size, preferably about 10 μm in size on an average (p. 9, last full paragraph).

Heikkilä *et al.* also teach that microcrystalline lactitol may be microcrystallized with other compounds, including other sugar alcohols (p. 5, paragraphs 1-3). If the solid and/or liquid feed comprises other components, the product discharged from the microcrystallization apparatus will contain said other component(s) (p. 5, paragraph 5). These components can be an excipient, an active ingredient, and/or other sweetener (claim 5). Such other sweeteners are preferably also non-cariogenic (p. 5, paragraph 2). An alternate process by which other components can be microcrystallized with lactitol is by using a secondary spray containing the excipient, active ingredient, or sweetener (p. 5, paragraph 5; claim 6).

It is noted that although Heikkilä *et al.* teach that microcrystalline lactitol may be microcrystallized with other compounds by discharging a solution containing both the lactitol and the other compound, or by using a secondary spray containing the other compound, separate from lactitol, Heikkilä *et al.* do not expressly indicate whether the separate solutions are sprayed simultaneously or intermittently onto the dry feed particles. However, as both methods would yield a similar result, it is considered within the capabilities of one of ordinary skill in the art to determine the method most suitable for their intended purpose. Moreover, Applicants are requested to note that it has been held that merely reversing the order of steps in a multi-step process is not a patentable modification absent unexpected or unobvious results. See MPEP § 2144.04. *Ex parte Rubin*, 128 USPQ 440 (Bd. App. 1959); *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946); *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930); *Cohn v. Comr. Patents*, 251 F. Supp. 437, 148 USPQ 486 (D.C. 1966). It is the Office's position that

this is also applicable to the instant situation in which solutions are sprayed simultaneously or intermittently since the difference is merely an order of when the different solutions are applied onto the feed to form the product.

It is further noted that Heikkilä *et al.* do not expressly teach that the ratio of liquid feed to dry feed is between 1:1 and 1:2 on DS, as instantly claimed. However, Table 1 (p. 12) discloses a variety of conditions used for lactitol microcrystallization, including conditions in which the amount of feed solution and dry feed is varied. For example, the DS concentration of the feed solution can be 51.1%, 49.6% or 54.2%, and the dry feed varies from 1.9-4.0 kg. Since these values are within the range of those disclosed in the instant Specification, it is the Office's position that they would meet the instant limitations that the ratio of liquid feed to dry feed is between 1:1 and 1:2 on DS. Furthermore, Heikkilä *et al.* teach that the suitable ratio of liquid lactitol feed to solid lactitol feed varies with the microcrystallization conditions (p, 7, paragraph 4), and can therefore be adjusted accordingly.

Although Heikkilä *et al.* teach that other components, such as non-cariogenic sweeteners, including other sugar alcohols, may be microcrystallized with microcrystalline lactitol, Heikkilä *et al.* do not expressly teach a process for the microcrystallization of polyols wherein the polyols comprise at least two polyols.

Oravainen *et al.* teach a hard candy containing, as a sweetener, 30-70% by weight of xylitol in combination with 70-30% by weight of another tooth-friendly sugar alcohol, or a mixture thereof (p. 1, paragraph 2). The cariostatic properties and pleasant taste of xylitol make it a sweetener extremely suitable for replacing sucrose.

Other known tooth-friendly sugar alcohols, such as sorbitol, maltitol, isomalt and lactitol, are suited to be used for the same purpose (p. 1-2, bridging paragraph). The tooth-friendly properties of xylitol are at their best when the amount of xylitol is at least 50% of the sweeteners used, and also the other sweeteners are selected from the tooth-friendly sugar alcohols of sorbitol, maltitol, isomalt and lactitol (p. 2, first full paragraph). The sensory impression properties of the final product are the most advantageous when the amount of xylitol is 50 to 70% (p. 2, first full paragraph).

As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Heikkilä *et al.*, regarding a process for the microcrystallization of lactitol with other components, with the teachings of Oravainen *et al.,* which teach a sweetener composition comprising 30-70% xylitol in combination with 70-30% of sorbitol, maltitol, isomalt, and lactitol. One would have been motivated to combine the teachings and include xylitol and lactitol in a crystallization composition in order to receive the expected benefit, as suggested by Oravainen *et al.*, that the tooth-friendly properties of xylitol are at their best when the amount of xylitol is at least 50% of the sweeteners used, and also the other sweeteners are selected from the tooth-friendly sugar alcohols of sorbitol, maltitol, isomalt and lactitol. Since Heikkilä *et al.* teach that other sweeteners that are preferably non-cariogenic may also be added to the lactitol composition for microcrystallization, one of ordinary skill in the art would have reasonably expected the addition of xylitol to the lactitol microcrystallization process to result in co-crystallization of lactitol and xylitol. With regards to the limitation wherein each of the dissolved polyols must be present in at least 25% by weight, it is noted that

Heikkilä *et al.* teach that the xylitol purity is preferably more than 80%. However, as Oravainen *et al.* teach a product containing 50-70% by weight of xylitol in combination with 70-30% by weight of sorbitol, maltitol, isomalt, or lactitol, is most advantageous for sensory impression properties, it would have been *prima facie* obvious for one of ordinary skill in the art to vary the concentration of the method so as to obtain an optimal method for producing a product with optimal taste. See below for recitation of a section from MPEP § 2144.05 regarding the obviousness of optimization of ranges.

The following is a quotation of MPEP § 2144.05:

> A. Optimization Within Prior Art Conditions or Through Routine Experimentation
> Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.); see also Peterson, 315 F.3d at 1330, 65 USPQ2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969) (Claimed elastomeric polyurethanes which fell within the broad scope of the references were held to be unpatentable thereover because, among other reasons, there was no evidence of the criticality of the claimed ranges of molecular weight or molar proportions.). For more recent cases applying this principle, see Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

Moreover, one would also be motivated to vary the concentration of polyols in the crystallization process in order to co-crystallize lactitol and xylitol so as to obtain a product with optimal taste since it is *prima facie* obvious that the addition of one component, comprising co-crystals of lactitol and xylitol, would require less steps than having to add two separate polyol crystals, to a composition in order to obtain a product with desired taste.

Thus, the claimed invention as a whole is *prima facie* obvious over the combined teachings of the prior art.

*Response to Arguments*

Applicants' amendment and remarks, filed 29 October 2009, with respect to the rejection of claims 58-73 and 75 under 35 USC § 103(a), as being unpatentable over U.S. Patent No. 6,764,706 B1 to Heikkilä *et al.*, in view of US Patent No. 5,017,400 to Olinger *et al.*, have been fully considered but are moot in view of the new ground(s) of rejection.

It is noted that Applicants have made a 35 USC § 103(c) to state that "at the time the present invention was made, the '706 patent and the present invention were owned by the common owner, which is Danisco Sweeteners OY, or was subject to an obligation of assignment to Danisco Sweeteners OY." The new ground of rejection in section [0001] above is made over the WIPO equivalent of U.S. Patent No. 6,764,706, WIPO publication WO 99/59426 to Heikkilä *et al.*, which is available as prior art under 35 USC 102(b), and thus cannot be overcome by a 35 USC § 103(c) statement.

***Conclusion***

No claim is allowed. This rejection is made NON-FINAL due to the new/modified grounds of rejection.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,395,893 B1 is equivalent to WIPO publication WO 99/47532 used in section [0002] of the rejections made above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SCARLETT GOON whose telephone number is 571-270-5241. The examiner can normally be reached on Mon - Thu 7:00 am - 4 pm and every other Fri 7:00 am - 12 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shaojia Anna Jiang/
Supervisory Patent Examiner, Art Unit 1623

SCARLETT GOON
Examiner
Art Unit 1623